Small, stationary infrared thermometers in 2-wire technique for non-contact temperature measurement of non-metallic surfaces between -20°C and 600°C

IN 300

$C\!E$

- Very small housing dimensions for easy installation, suitable for use in confined spaces

- 2-wire technique for current supply and temperature measurement at the same time

- Stainless steel housing

- Easy electrical and mechanical installation

- Suitable for food industry

- Ambient temperature up to 70°C without cooling

The IN 300 is a stationary pyrometers for non-contact temperature measurement of non-metallic surfaces or painted, coated or anodized metals.
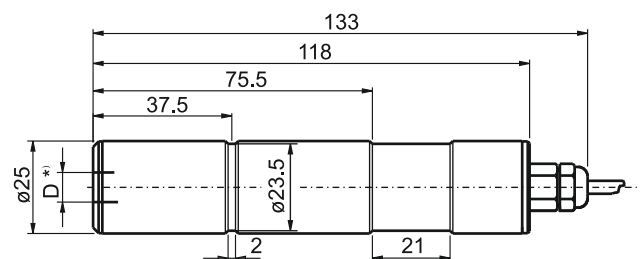
The very small housing dimensions enable the integration of the pyrometer into compact production machines, the 2-wire technique enables very easy electrical connection.

The solid and robust design of the instrument guarantees high operational safety even in rough industrial environments.

Typical applications are measurements on:

- Plastics
- Rubber
- Paper
- Ceramics
- Textiles
- Food

- Fluids
- Painted parts
- Asphalt
- Wood
- Glass
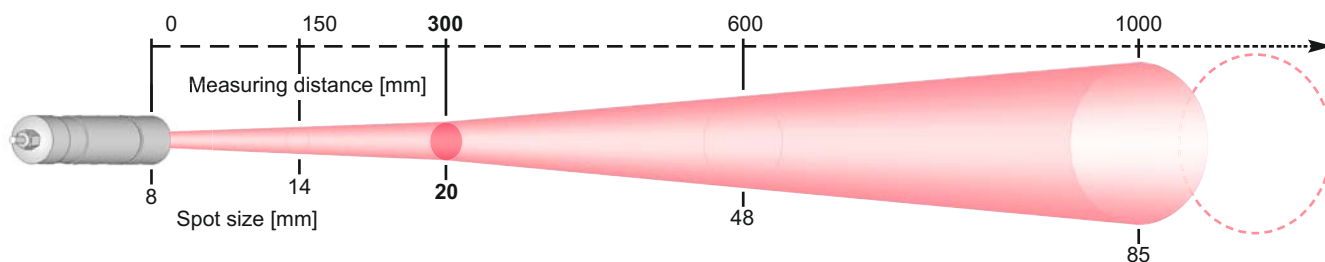- Coated metals

Dimensions [mm]:

Technical Data

Temperature ranges:	0 ... 100°C	0 ... 500°C
	0 ... 200°C	0 ... 600°C
	-20 ... 300°C	
Spectral range:	8 ... 14 µm	
Optics:	Ge lens	
Output:	4 ... 20 mA, load independent current, temperature linear	
Max load:	500 Ω at 24 V power supply	
Emissivity ε:	0.4 ... 1; adjustable	
Response time t_{90}:	300 ms	
Uncertainty: (ε = 1, $T_{amb.}$ = 23°C)	1.5% of measuring range / °C	
Repeatability:	1% of measuring range	

Temp. dependence:	0 ... 60°C: 0.03% of measuring range per °C (23°C)
Distance ratio:	15 : 1
Power supply:	24 V DC ± 25% stabilized, ripple < 50 mV
Ambient temperature:	0 ... 70°C
Storage temperature:	-20 ... 70°C
Housing:	stainless steel
Protection class:	IP65 (DIN 40 050)
Weight:	215 g
Connection cable:	2 m length, fixed
CE label:	according to EU directives about electromagnetic immunity

Optics

Measuring distance [mm]: 0, 150, **300**, 600, 1000

Spot size [mm]: 8, 14, **20**, 48, 85

Reference Numbers

3 856 310	0 ... 100°C		3 856 350	0 ... 500°C
3 856 320	0 ... 200°C		3 856 360	0 ... 600°C
3 856 330	-20 ... 300°C			

Accessories:

3 852 290	Power supply NG DC, 100 to 240 V AC, 50 to 60 Hz ⇒ 24 V DC, 1 A		3 863 010	Converter 4 ... 20 mA to 0 ... 20 mA
			3 834 230	Adjustable mounting support
3 852 550	Power supply NG 2D; 85 ... 265 V AC ⇒ 24 V DC, 600 mA, with 2 limit switches		3 846 170	Mounting tube
			3 835 180	Air purge unit, stainless steel
3 890 640	DA 4000-N, LED-display, 2-wire power supply		3 835 220	Air purge unit, stainless steel, short version
3 890 650	DA 4000, LED-display, 2-wire power supply, 2 limit switches (relay contacts)		3 835 240	90° mirror
			3 827 070	Laser targeting light
3 890 520	DA 6000, LED-display, RS232, 2-wire power supply, maximum value storage, analog output		3 827 100	Twin laser targeting light
			3 837 160	Stainless steel water cooling jacket with integrated air purge unit
3 890 530	DA 6000 with RS485			
3 890 610	Galvanic separator for measuring output (carrier rail mounting housing)		3 834 210	Adjustable mounting support for water cooling jacket

Accessory overview

Mechanical:

Mounting support

Air purge unit

90°-mirror with air purge unit

Laser targeting light

Water cooling jacket with air purge unit

Electrical:

LED digital display DA 6000

Power supplies NG DC NG 2D

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